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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/586,163

07/14/2006

Kunihiro Fushimi

MEM-001

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32628

7590

03/16/2010

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EXAMINER

YAGER, JAMES C

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

03/16/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/586,163	Applicant(s) FUSHIMI ET AL.	
	Examiner JAMES YAGER	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 11-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 11-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 16 February 2010 has been entered.

Response to Amendment

2. The amendment filed 16 February 2010 has been entered. Claims 1-3 and 11-13 are currently pending in the application. The rejections of record from the office action dated 20 November 2009 not repeated herein have been withdrawn.

Claim Objections

3. Claim 12 is objected to because of the following informalities: The claim ends with a comma. The claim must end with a period (MPEP 608.01(m)). Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-3 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. While there is support to recite that the pencil hardness of the hardened coating film is 3 to 5 H in accordance with JIS K5600, there does not appear to be support to broadly recite that the hardened coating film has a hardness of more than 3H in pencil hardness.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 12, the phrase "as a lower layer" renders the claim indefinite because it is unclear what is meant by this phrase.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 1-3 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koike et al. (US 2003/0156080) in view of Sternbergh (US 5,694,240).

Regarding claims 1-3 and 11-13, Koike discloses a display filter which is disposed on a Braun tube (CRT) (i.e. a multicolor glass vessel, comprising a base vessel) ([0001]) comprising a hard coat film on the substrate glass, wherein the hard coat film comprises a silicone type resin or a melamine type resin (i.e. a hardened coating film interposed between the base vessel and the multilayer film; wherein the hardened coating film comprises at least one material selected from the group consisting of poly-siloxane based resin, melamine resin) ([0111]-[0115]), wherein the hardened coating film is from about 1 to about 100 μ m (i.e. wherein the hardened coating film has a thickness in the range of about 1 to about 100 μ m) ([0115]) and a functional transparent layer having anti-reflection property which may be a laminate of two or more layers of thin films which have different refractive indices from one another in alternating order (i.e. multilayer film) ([0242]).

Given that Koike discloses an example wherein the hardness of the hard coat layer is 3H in pencil hardness ([0339]), it is the Examiner's position that it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the hard coat layer of Koike 3H in hardness to provide a hard coat layer that prevents scratching (i.e. and a hardness more than 3H in pencil hardness; clearly overlapping wherein the hardened layer has the hardness between 3H and 5H in pencil hardness).

Although there is no disclosure that the pencil hardness is measured according to JIS K-5600, absent evidence of criticality of how the pencil hardness is measured and

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given that it overlaps that presently claimed, the pencil hardness of Koike meets the claimed pencil hardness.

Alternatively, since the instant specification is silent to unexpected results, the specific pencil hardness of the hardened coating is not considered to confer patentability to the claims. As the scratch resistance of the coating and durability of the coating are variable(s) that can be modified, among others, by adjusting said hardness of the hardened coating, the precise hardness would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the claimed hardness cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the hardness of the hard coat layer to obtain the desired balance between scratch resistance and durability (In re Boesch, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (In re Aller, 105 USPQ 223).

Given that the glass substrate is a Braun tube CRT. It is clearly transparent (i.e. hyaline) ([0001]).

Koike does not disclose a multilayer film composed of two vapor deposition layers whose refractive indices differ from each other by 0.1 or more, wherein the two vapor deposition layers comprises a first layer and a second layer which covers the first layer, the first and second layers being sequentially provided on at least one of an

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external surface and an internal surface of the base vessel, wherein the first layer has a refractive index lower than a refractive index of the second layer, and contains at least one layer selected from the group consisting of a silica layer, a chromium layer, a zirconium layer, and an aluminum layer, wherein the second layer contains a titanium layer, wherein the two vapor deposition layers comprise a silica layer and a titanium layer, and are arranged alternately more than two layers, wherein the multiple vapor deposition layers have respective thicknesses in a range of 50 to 3,000nm, wherein the multilayer film comprises a plurality of a set of the first and second layers, and, as a lower layer of said multilayer film, at least one layer having a thickness of 10-100nm and selected from the group consisting of a silica layer, a chromium layer, a zirconium layer and an aluminum layer.

Sternbergh discloses a sunglass having an absorbing layer comprising a stack of alternating layers of materials with high and low refractive indices (preferably at least 9 alternating layers), wherein high refractive index denotes about 2.0 to 2.5 and low refractive index denotes 1.37 to 1.52, wherein the layers are alternating layers composed of titanium dioxide and silicon dioxide and the thicknesses of the individual layers is generally about 20 to 100nm and are deposited by physical vapor deposition (i.e. multilayer film composed of two vapor deposition layers whose refractive indices differ from each other by 0.1 or more, wherein the two vapor deposition layers comprises a first layer and a second layer which covers the first layer, the first and second layers being sequentially provided on at least one of an external surface and an internal surface of the base vessel, wherein the first layer has a refractive index lower

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than a refractive index of the second layer, and contains at least one layer selected from the group consisting of a silica layer, wherein the second layer contains a titanium layer, wherein the two vapor deposition layers comprise a silica layer and a titanium layer, and are arranged alternately more than two layers; clearly overlapping wherein the multiple vapor deposition layers have respective thicknesses in a range of 50 to 3,000nm; wherein the multilayer film comprises a plurality of a set of the first and second layers, and, as a lower layer of said multilayer film; clearly overlapping at least one layer having a thickness of 10-100nm and selected from the group consisting of a silica layer) (C3/L55-C4/L28). It is the Examiner's position that the layer of silica closest to the substrate is a lower layer of said multilayer film comprising silica. Sternbergh discloses that the absorbing layer reduces transmittance of UV radiation and reduces reflected light (C3/L55-C4/L28).

Koike and Sternbergh are analogous art because they both teach about glass substrates having anti-reflective coatings comprising alternating layers of materials having high refractive indices and low refractive indices. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the absorbing layer of Sternbergh as the functional transparent layer having anti-reflection property of Koike in order to provide a Braun tube (CRT) having good anti-reflective properties and low UV radiation transmission.

Response to Arguments

12. Applicant's arguments with respect to claims 1-3 and 11-13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES YAGER whose telephone number is (571)270-3880. The examiner can normally be reached on Mon - Fri, 7:30am-5pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JY 3/11/10

/Rena L. Dye/
Supervisory Patent Examiner, Art Unit 1794

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